

Center for Total Artificial Hearts & Biomedical Devices

Distinguished Center

Dr. Donald B. Olsen/University of Utah/SLC, Utah

Established as a center in 1987. Currently developing the first electro-hydraulic artificial heart (an advanced version of the JARVIK-7) which utilizes a single energy converter and unified ventricles that will fit in humans. Other implant projects include the urinary bladder, urethra, ureter and a sphincter. The center's scope of research includes: conceptualization, prototype development, fabrication, bench and implant testing and assessment. Received "Distinguished Center" status in 1991.

Overview	Technologies	Status	Economic Impact
<p>Current State Contract \$20,000</p> <p>FY92 Matching Funds . . . \$2,769,003</p> <p>Cumulative \$10,755,877</p> <p>Total Jobs Created 51</p> <p>Center 51</p> <p>Direct Center Spin-offs 0</p> <p>Total Benefiting Utah Companies . . . 0</p> <p>License Agreements 3</p> <p>Patents Applied 3</p> <p>Patents Issued 2</p>	<p>* Engineering-miniature hydraulics, device design, design analysis, CNC machining capability, computer machining capability, device fabrication, polymers, plastics, metallics and QA/QC</p> <p>* Electrical design & fabrication</p> <p>* Integrated circuits & VLSI</p> <p>* Device testing</p> <p>* Animal experimentation-surgery, radiology, hematology, immunology, biochemistry, pathology, device retrieval analysis</p>	<p>* Have established shared leadership in electric artificial heart projects</p> <p>* Have only system with motor backup capabilities</p> <p>* Considered world leader in artificial organ research</p> <p>* Conducting animal studies for fully implantable electric artificial heart</p>	<p>* \$10 million backlog in research</p> <p>* Have formed joint venture company, Cardio West with Ariz. Med Ctr.</p> <p>* Re-acquired pneumatic heart rights to reinstate testing.</p>

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